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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,274	10/16/2001	Masato Fujinaga	50099-184	1996

7590 12/13/2002

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EXAMINER
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ANDUJAR, LEONARDO

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 12/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/977,274

Applicant(s)

FUJINAGA, MASATO

Examiner

Leonardo Andújar

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I (claims 1-8) in Paper No. 4 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 11/16/2000. It is noted, however, that applicant has not filed a certified copy of the P2000-349807 application as required by 35 U.S.C. 119(b).

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application

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being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Harari (US 5,198,380).

7. Regarding claim 1, Harari (e.g. fig. 5f) shows a high-frequency semiconductor device comprising:

- A semiconductor substrate 563 having a main surface;
- A first wiring 504a provided over the main surface of the semiconductor substrate;
- And a conductor layer 509 continuously covering a periphery of the first wiring with a first insulator 567a interposed therebetween in a section crossing a direction of extension of the first wiring.

8. Regarding claim 3, Harari shows that the upper surface of the conductor layer is flat.

9. Regarding claim 8, Harari shows that the first insulator, which covers upper and side surfaces of the first wiring and is provided in contact with the conductor layer, is formed of the same material.

10. Claims 1-3, 5, 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al. (US 6,329,680).

11. Regarding claim 1, Yoshida (e.g. fig. 6) shows a high-frequency semiconductor device comprising:

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- A semiconductor substrate 1 having a main surface;
- A first wiring 5 provided over the main surface of the semiconductor substrate;
- And a conductor layer (12, 17 and M1) continuously covering a periphery of the first wiring with a first insulator (8-10) interposed therebetween in a section crossing a direction of extension of the first wiring.

12. Regarding claim 2, Yoshida shows a second wiring BL1 provided over the main surface of the semiconductor substrate with an insulating film 10 interposed therebetween, the conductor layer continuously covering upper and side surfaces of the second wiring with a second insulator (14, 13) interposed therebetween in a section crossing a direction of extension of the second wiring and being connected to the semiconductor substrate via the plug 12.

13. Regarding claim 3, Yoshida shows that an upper surface of the conductor layer is flat.

14. Regarding claim 5, Yoshida shows that the conductor layer continuously covers a periphery of the second wiring in cooperation with the semiconductor substrate with the second insulator and insulting film interposed therebetween in the section crossing the direction of extension of the second wiring.

15. Regarding claim 7, Yoshida shows that a portion of the second insulator which covers the upper and side surface of the second wiring is provided in contact with the conductor layer is formed of the same material.

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16. Regarding claim 8, Yoshida shows that the first insulator, which covers upper and side surfaces of the first wiring and is provided in contact with the conductor layer, is formed of the same material.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (US 6,329,680) in view of Assaderaghi et al (US 5,784,311).

19. Regarding claim 4, Yoshida shows that the conductor is connected to the impurity region 11d. In reference to the claim language referring to the function of the conductor layer (i.e. to transmit a source potential), intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963). Furthermore, it is well known in the art that diffusion regions may work as source or drain, according to the direction of the current therethrough. For example, Assaderaghi teaches that diffusion regions may work as source or drain, according to the direction of the current

therethrough (col. 4/lls. 35-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the conductor layer disclosed by Yoshida to transmit a source or drain potential since it is in the general knowledge of one having ordinary skills in the art that diffusion regions may work as source or drain, according to the direction of the current therethrough as taught by Assaderaghi.

***Allowable Subject Matter***

20. Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

21. Papers related to this application may be submitted directly to Art Unit 2826 by facsimile transmission. Papers should be faxed to Art Unit 2826 via the Art Unit 2826 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2826 Fax Center number is **(703) 308-7722** or **-7724**. The Art Unit 2826 Fax Center is to be used only for papers related to Art Unit 2826 applications.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Leonardo Andújar** at **(703) 308-0080** and between the hours of 9:00 AM to 7:30 PM (Eastern Standard Time) Monday through Thursday or by e-mail via [Leonardo.Andujar@uspto.gov](mailto:Leonardo.Andujar@uspto.gov). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn, can be reached on (703) 308-6601.

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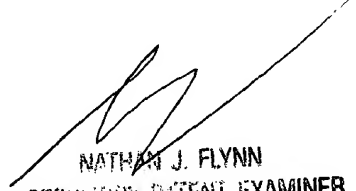
23. Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 2800 Receptionist** at **(703) 305-3900**.

The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass (es): 257/758, 774 and 778	12/01
Other Documentation:	
Electronic Database(s): East (USPAT, US PG PUB, JPO, EPO, Derwent, IBM TDB)	12/01

**Leonardo Andújar**

Patent Examiner Art Unit 2826

LA  
12/6/02

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